IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

NARISTE NETWORKS PTY. LTD.	§	
	§	
Plaintiff,	§	
	§	
v.	§	Civil Action No. 2:23-cv-00031
	§	
SAMSUNG ELECTRONICS CO., LTD.	§	JURY TRIAL DEMANDED
and SAMSUNG ELECTRONICS	§	
AMERICA, INC.	§	
	§	
Defendants.	§	

PLAINTIFF'S ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Nariste Networks Pty. Ltd. ("Nariste" or "Plaintiff") hereby submits this Complaint for patent infringement against Defendants Samsung Electronics Co., Ltd. ("SEC"), and Samsung Electronics America, Inc. ("SEA") (collectively, "Defendant" or "Samsung") and states as follows:

I.   NATURE OF THE ACTION

1.   This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including, for example, 35 U.S.C. §§ 271, 281, 283, 284, and 285.

II.   THE PARTIES

2.   Nariste is a Proprietary Limited Company organized under the laws of Australia with its principal place of business at 81-83 Campbell Street, Surry Hills, NSW 2010, Australia.

3.   On information and belief, defendant SEC is a corporation organized and existing under the laws of the republic of Korea, with its principal place of business at 129 Samsung-ro, Maetan-3dong, Yeongtong-gu Suwon-si, Gyeonggi-do 16677, Suwon-Shi, Korea.

4.   On information and belief, defendant SEA is a corporation organized and existing

under the laws of New York, with its principal place of business at 85 Challenger Road, Ridgefield

Park, New Jersey, 07660, and maintains a regular and established place of business in this District,

including for example at 6625 Excellence Way, Plano, Texas 75023; 1303 East Lookout Drive,

Richardson, Texas 75082; 2800 Technology Drive, Suite 200, Plano, Texas 75074; and 2601

Preston Road, Frisco, Texas 75034. Moreover, SEA indicated in early 2019 that it would be

centralizing multiple offices in a location in this District at the Legacy Central office campus,

located at 6225 Declaration Drive, Plano, Texas 75023.[1] SEA is registered to do business in the

state of Texas and may be served with process through its registered agent CT Corporation System,

located at 1999 Bryan St., Suite 900, Dallas, Texas 75201.

5.   On information and belief, SEA is a wholly owned subsidiary of SEC.

6.   On information and belief, Samsung has authorized sellers and sales representatives

that offer and sell products pertinent to this Complaint to consumers throughout the State of Texas,

including in this Judicial District, such as: Best Buy, 422 West TX-281 Loop, Suite 100,

Longview, Texas 75605; Best Buy, 308 E End Blvd S, Marshall, Texas 75670; AT&T, 1712 East

Grand Avenue, Marshall, Texas 75670; TMobile, 1806 East End Boulevard North, Suite 100,

Marshall, Texas 75670; TMobile, 900 East End Boulevard North, Suite 100, Marshall, Texas

75670; Verizon authorized retailers, including Russell Cellular, 1111 East Grand Avenue,

Marshall, Texas 75670; Victra, 1006 East End Boulevard North, Marshall, Texas 75670; and

Cricket Wireless authorized retailer, 120 East End Boulevard South, Marshall, Texas 75670.

7.   Samsung sells, offers for sale, makes, uses, and/or imports cellular phones, tablets,

and other mobile devices throughout the United States, including within this District that

incorporate the infringing technologies.

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[1] https://news.samsung.com/us/samsung-electronics-america-open-flagship-north-texas-campus/ (last visited Dec. 30, 2022).

III.   JURISDICTION AND VENUE

8.   This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a) because this action arises under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. § 271.

9.   This Court has personal jurisdiction over Samsung at least because Samsung conducts business in this Judicial District and in the State of Texas.

10.   This Court also has personal jurisdiction over Samsung at least because Samsung has committed acts of patent infringement and/or has induced acts of patent infringement by others in this Judicial District and in the State of Texas. Samsung has sold and offered for sale products that infringe Nariste's patent rights and has induced others to use Samsung products to infringe Nariste's patent rights. On information and belief, these products, including the Samsung cellular phones, tablets and other mobile products (defined below and collectively referred to herein as the "Infringing Products") have been manufactured, offered for sale, sold, used, and/or imported in the United States, within the State of Texas and within this Judicial District.

11.   This court also has personal jurisdiction over Samsung because Samsung has placed the Infringing Products into the stream of commerce, with the expectation that they will be purchased and used by customers in the State of Texas and in this Judicial District. On information and belief, customers in the State of Texas and in this District have purchased and used and continue to purchase and use the Infringing Products. Accordingly, Samsung's conduct and connections with the State of Texas are such that it should reasonably have anticipated being brought into court here.

12.   Accordingly, Samsung has established minimum contacts with this forum such that the exercise of jurisdiction over Samsung would not offend traditional notions of fair play and substantial justice.

13.   Venue is proper in this District as to SEC pursuant to 28 U.S.C. §§ 1391 and 1400(b) because, among other things, being an alien corporation, SEC may be sued in any judicial district. Further, venue is proper in this District as to SEC pursuant to 28 U.S.C. §§ 1391 and 1400(b) because SEC is a foreign company doing business in the United States through SEA, SEA and SEC are subject to personal jurisdiction in this District, have committed acts of patent infringement in this District, and have a regular and established place of business in this District.

14.   Venue is proper in this District as to SEA pursuant to 28 U.S.C. §§ 1391 and 1400(b) because, among other things, SEA has committed acts of infringement in this judicial District and has a regular and established place of business in this District, including but not limited to regular and established places of business at 6625 Excellence Way, Plano, Texas 75023 and 2601 Preston Road, Frisco, Texas 75034.

15.   Samsung has committed acts within this Judicial District giving rise to this action, and Samsung continues to conduct business in this District, including through the importation, sale, offer for sale and use of Infringing Products.

16.   Joinder of SEC and SEA is proper under 35 U.S.C. § 299 because Nariste asserts its right to relief against SEC and SEA jointly, severally, or in the alternative with respect to or arising out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, using, importing into the United States, offering for sale, selling of the same accused products or processes, including Samsung cellular phones, tablets and other mobile products; and questions of fact common to SEC and SEA will arise in the action.

IV.   BACKGROUND

17.   This complaint arises from Samsung's infringement of United States Patent No. RE48,206 ("Asserted Patent" or "'206 Patent").

18.   On September 15, 2020, the United States Patent and Trademark office duly and

legally issued the '206 Patent which is entitled "Reduced Power in Mobile GPS-Based Technologies." The '206 Patent is valid and enforceable.

19.   The inventor of the '206 Patent is Dr. Robert Anderson Malaney.

20.   Nariste is the sole and exclusive owner of all rights, title, and interest in the '206 Patent, including the sole and exclusive right to prosecute this action, to enforce the '206 Patent against infringers, to collect damages for past, present and future infringement of the '206 Patent, and to seek injunctive relief as appropriate under the law. Accordingly, Samsung's infringement, as described below, has injured, and continues to injure Nariste.

21.   The '206 Patent generally relates to GPS acquisition and more particularly, to power conservation for GPS-enabled devices.

22.   Nariste focuses on the development of wireless technology that utilizes location information to enhance mobile application performance. The inventions of the '206 Patent grew out of research conducted by Dr. Malaney. Following the filing of the application that issued as the '206 Patent, Nariste undertook extensive field trials of its technology, proving the usefulness of the technology in acquiring location information that met certain technical requirements, whilst reducing mobile-battery usage.

23.   By 2010, GPS-equipped mobile phones had become standard, and providers of such phones had become aware of battery-power depletion issues due to on-board GPS chips. Accordingly, over time, the technology developed by Nariste was widely adopted by various mobile devices including those imported, used, manufactured, offered for sale, or sold by Samsung.

24.   On December 3, 2020, Nariste sent a letter to Samsung's Director of Patent Acquisition and asked if Samsung would be interested in purchasing the patent. Nariste never

received a response to that letter from Samsung.

25.   Nariste has not licensed or otherwise authorized Samsung to make, use, offer for sale, sell, or import any products that embody the inventions of the '206 Patent.

26.   Samsung Galaxy phones include a GPS antenna to track real-time location data.[2] A user can easily turn on and off the location service on the phone.[3] A user can also improve location accuracy to get more accurate location services.[4] Samsung provides instructions on "[h]ow to activate [] location and change settings for location permissions" on its website.[5]

27.   GPS is used by the Android Operating System ("Android OS") running on Samsung devices. Additionally, many applications running on Samsung devices use GPS.

28.   It is important to users of cellular phones, tablets, smart watches and other mobile devices (collectively, "Mobile Devices") that the device consume power in an efficient manner. The users of Mobile Devices prefer a device that consumes less power in a given time period to a device that consumes more power in the same given time period.

29.   The users of Mobile Devices prefer a device that needs to be charged less frequently to a device that would have to be charged more frequently.

30.   The GPS system is one of the most power-intensive systems of a smart phone. Accordingly, an inefficient consumption of power by the GPS system in Samsung Mobile Devices is undesirable. For instance, keeping the GPS system in the Samsung Mobile Devices fully powered "on" at all times would prematurely drain the device battery, requiring the user to charge the device more frequently. On the other hand, having a GPS system in the Samsung Mobile

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[2] https://www.samsung.com/latin_en/support/mobile-devices/how-to-activate-my-location-and-change-settings-for-location-permissions (last visited Dec. 27, 2022).
[3] *Id.*
[4] *Id.*
[5] *Id.*

Devices that is selectively turned on and off to use power more efficiently is preferred.

31.   A user can easily activate location services in Samsung Mobile Devices based on instructions provided by Samsung:[6]
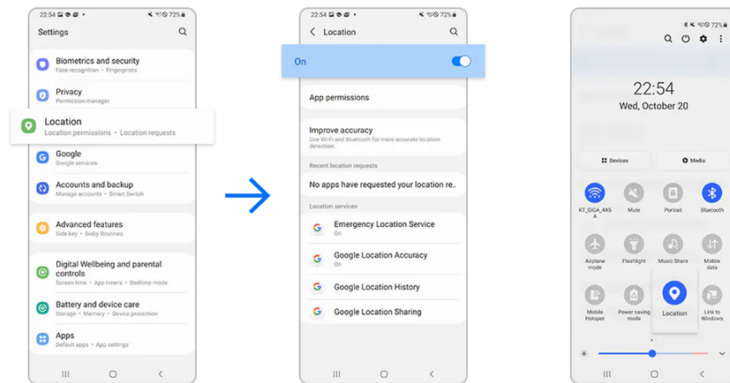

32.   Moreover, a user can change the settings for location information permissions in Samsung Mobile Devices using instructions provided by Samsung:[7]

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[6] https://www.samsung.com/latin_en/support/mobile-devices/how-to-activate-my-location-and-change-settings-for-location-permissions/ (last visited Dec. 27, 2022).
[7] *Id.*

How to change settings for location information permissions

You can see which apps are using your location services and grant or block permissions individually. You can also increase the accuracy of the signal to ensure that your positioning is correct every time.

App permission

View the list of apps that have permission to access the device's location and edit the permission settings.

Step 1. Select **App permissions**, in the **Location** settings menu.

Step 2. Check the apps that can access the device's location.

Step 3. For example, if you want to allow the **Camera** app to use the location, select **Allow only while using the app.**
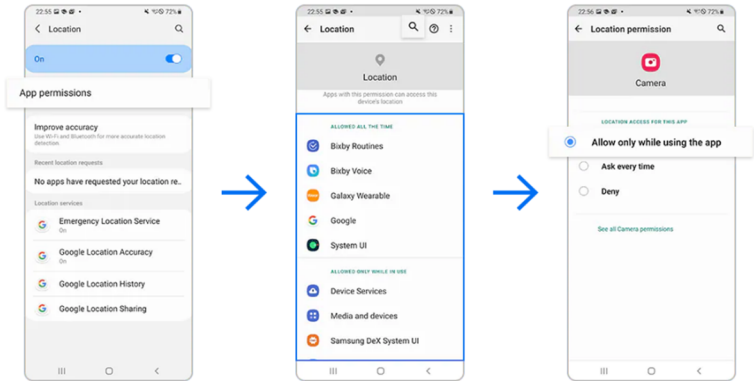
33.   Additionally, Samsung provides user instructions to improve location accuracy in Samsung Mobile Devices:[8]

Improve accuracy

Set your phone to use the Wi-Fi or Bluetooth feature to increase the accuracy of your location information, even when the features are deactivated. The Improve accuracy feature lets you find your location more accurately, while disabling the feature saves data usage and battery power.

Step 1. Select **Improve accuracy**, in the **Location** settings menu.

Step 2. Tap the switches to activate **Wi-Fi scanning** and **Bluetooth scanning.**
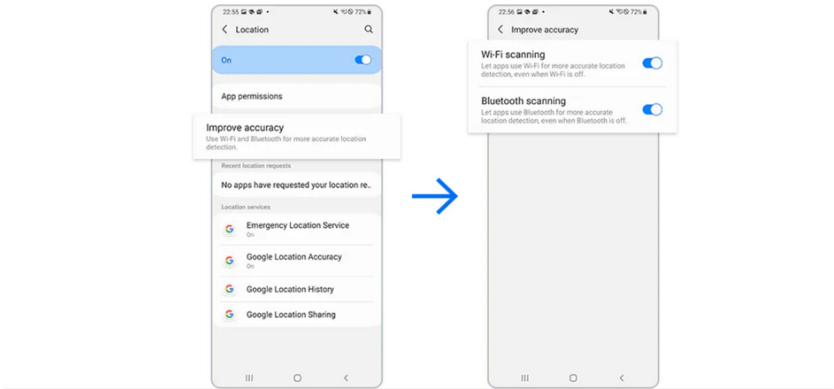
34.   Samsung's Mobile Devices operate using the Android OS.

35.   The Android OS is developed and is made available by Google.

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[8] *Id.*

36.   Additional instructions and information regarding the operation of the Android OS on the Samsung Mobile Devices are provided by Google.

37.   For example, a user is provided with instructions on how to "[H]elp [his/her] phone get a more accurate location (Google Location Services a.k.a. Google Location Accuracy):[9]

Help your phone get a more accurate location (Google Location Services a.k.a. Google Location Accuracy)

Turn your phone's location accuracy on or off

Android 12 & higher
1. Swipe down from the top of the screen.
2. Touch and hold Location ⊙.
   • If you don't find Location ⊙:
      a. Tap Edit ✎ or Settings ⚙.
      b. Drag Location ⊙ into your Quick Settings.
3. Tap **Location Services** ＞ **Google Location Accuracy**.
4. Turn **Improve Location Accuracy** on or off.

Android 11 & lower
1. Swipe down from the top of the screen.
2. Touch and hold Location ⊙.
   • If you don't find Location ⊙:
      a. Tap Edit ✎ or Settings ⚙.
      b. Drag Location ⊙ into your Quick Settings.
3. Tap **Advanced** ＞ **Google Location Accuracy**.
4. Turn **Improve Location Accuracy** on or off.

38.   When Google Location Accuracy is turned on, the Samsung Mobile Devices use GPS, Wi-fi, Mobile Networks, and Sensors (e.g., accelerometer) to get the most accurate location:[10]

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[9] https://support.google.com/accounts/answer/3467281?hl=en (last visited Dec. 27, 2022).
[10] *Id.*

When Google Location Accuracy is on   ⌃

When you have Google Location Accuracy turned on, your phone uses these sources to
get the most accurate location:

• GPS
• Wi-Fi
• Mobile networks
• Sensors (such as accelerometer)

Google may collect location data periodically and use this data in an anonymous way to
improve location accuracy and location-based services.

39.   For example, on information and belief, the Android OS allows applications

running on the Samsung Galaxy S20 to control power on (and off) functionality of GPS through

several attributes, e.g., one being setting the required accuracy to control whether GPS is used or

not:[11]

Understand battery drain

Location gathering and battery drain are directly related in the following aspects:

- Accuracy: The precision of the location data. In general, the higher the accuracy, the higher the battery drain.

- Frequency: How often location is computed. The more frequent location is computed, the more battery is used.

- Latency: How quickly location data is delivered. Less latency usually requires more battery.

Accuracy

You can specify location accuracy using the `setPriority()` method, passing one of the following values as the argument:

- `PRIORITY_HIGH_ACCURACY` provides the most accurate location possible, which is computed using as many inputs as necessary (it enables GPS, Wi-Fi, and cell, and uses a variety of Sensors), and may cause significant battery drain.

- `PRIORITY_BALANCED_POWER_ACCURACY` provides accurate location while optimizing for power. Very rarely uses GPS. Typically uses a combination of Wi-Fi and cell information to compute device location.

- `PRIORITY_LOW_POWER` largely relies on cell towers and avoids GPS and Wi-Fi inputs, providing coarse (city-level) accuracy with minimal battery drain.

- `PRIORITY_NO_POWER` receives locations passively from other apps for which location has already been computed.

The location needs of most apps can be satisfied using the balanced power or low power options. High accuracy should be reserved for apps that are running in the foreground and require *real time* location updates (for example, a mapping app).

40.   When Google Location Accuracy is off, GPS, Wi-Fi, network, and sensor data are

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[11] https://developer.android.com/guide/topics/location/battery (last visited Dec. 30, 2022).

not used or collected by Google Location Accuracy.[12] Moreover, for Android 12 and higher, a user

can manage each application's permission to access precise location.[13]

V.   COUNT I: INFRINGEMENT OF THE '206 PATENT

41.   Nariste incorporates each of the allegations of paragraphs 1–40 above.

42.   Samsung has directly infringed and continues to directly infringe the '206 Patent

by, for example, making, using, offering to sell, selling, and/or importing into the United States,

without authority, products that practice one or more claims of the '206 Patent.

43.   Samsung is not licensed or otherwise authorized to make, use, offer for sale, sell or

import any products that embody the inventions of the '206 Patent in the United States.

44.   Samsung has and continues to directly infringe one or more claims of the '206

Patent, including, for example, claim 37 of the '206 Patent, either literally or under the doctrine of

equivalents, by making, using, offering to sell, selling, and/or importing into the United States

Samsung Mobile Devices without authority and in violation of 35 U.S.C. § 271.

45.   With respect to the '206 Patent, Samsung's infringing products include any

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[12] *Id.*
[13] *Id.*

Samsung products with embedded GPS and WiFi capability including, for example, the following: (1) Samsung phones including, but not limited to, Samsung Galaxy S series (e.g., S9, S9+, S10, S10+, S10e, S20, S20+, S20 Ultra, S20 FE, S21, S21+, S21 Ultra, S21 FE, S22, S22+, S22 Ultra), Samsung Galaxy Z series (e.g., Fold4, Flip4, Fold3, Flip3, Fold2, Fold, Flip), Samsung Galaxy A series (e.g., A73, A72, A53, A52, A52s, A51, A50, A42, A33, A32, A23, A22, A20, A13, A12, A04, A04s, A04e, A03, A03S); (2) Samsung tablets including, but not limited to, Samsung Galaxy Tab A (e.g., A7, A7 Lite, A8, A10.1); Tab S (e.g., S4, S5e, S6, S6 Lite, S7, S7+, S7 FE, S8, S8 Ultra, S8+); and (3) Samsung watches including, but not limited to, Samsung Galaxy Watch Active, Watch Active 2, Watch, Watch 3, Watch 4 and Watch 5, as well as any other Samsung products with a similar structure or functionality (collectively, the "Accused Products").

46.   On information and belief, each of the Accused Products, includes the Android OS at the time it is manufactured, used, imported, offered for sale and/or sold in the United States.

47.   On information and belief, each of the Accused Products runs the Android OS when in use by a user.

48.   On information and belief, applications running on each of the Accused Products have access to the Android OS.

49.   On information and belief, the Accused Products come preloaded with a number of features and applications developed by Samsung. On information and belief, some of these features and application developed by Samsung use the device location information (collectively, "Samsung Location Apps").

50.   On information and belief, the Samsung Location Apps include, but are not limited

to, "Samsung Internet,"[14] "Samsung Health,"[15] and "Samsung Find my Mobile."[16]

51.   The Samsung Location Apps running on the Accused Products receive location information from the Android OS running on the device.

52.   For example, the Samsung Galaxy S20 ("Galaxy S20") includes a number of Samsung Location Apps including, but not limited to Bixby.[17]

Bixby

Bixby is a virtual assistant that learns, evolves, and adapts to you. It learns your routines, helps you set up reminders based on time and location, and is built in to your favorite apps. Visit **samsung.com/us/support/owners/app/Bixby** for more information.

○ From a Home screen, press and hold the **Side** key.

☼ **TIP** You can also access Bixby from the Apps list.

53.   Another example of a Samsung Location App on the Galaxy S20 is the "Emergency Mode Features" which allows a user to share his/her location information with emergency contacts.[18]

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[14] https://developer.samsung.com/internet/privacy-policy-us.html (last visited Jan. 4, 2023); https://www.youtube.com/watch?v=YuGgGq4vcUA (last visited Jan. 4, 2023).
[15] https://www.mainenewsonline.com/how-accurate-is-the-samsung-health-app/ (last visited Jan. 4, 2023).
[16] https://www.youtube.com/watch?v=gFv1qwE2OmY (last visited Jan. 4, 2023).
[17] https://downloadcenter.samsung.com/content/UM/202002/20200215055549358/UNL_STR_SM-G981U_SM-G986U_SM-G988U_EN_UM_Q_10.0_021220_FINAL.pdf#page74 (hereinafter, "S20 User Manual") (last visited Jan. 4, 2023) at 32.
[18] S20 User Manual at 52-53.

Emergency mode features

While in Emergency mode, only the following apps and features are available on the Home screen:

- **Flashlight**: Use the device's flash as a steady source of light.
- **Emergency alarm**: Sound an audible siren.

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Getting started

- **Share my location**: Send your location information to your emergency contacts.

54.   Another example of a Samsung Location App on the Galaxy S20 is the "Send SOS Messages" feature which allows a user to send a message with his/her location to designated contacts:[19]

Send SOS messages

Send a message with your location to designated contacts when you are in an emergency situation.

1. From Settings, tap ⚙ **Advanced features** › **Send SOS messages**, and then tap ⬤ to enable this feature.
2. Tap **Send messages to** and add recipients by creating new contacts or selecting from Contacts.
   - To include a picture from your front and rear camera, tap **Attach pictures**.
   - To include a five-second audio recording in your SOS message, tap **Attach audio recording**.
3. Press the **Side** key quickly three times to send an SOS message.

55.   Another example of a Samsung Location App on the Galaxy S20 is the feature which attaches a GPS location tag to pictures.[20]

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[19] S20 User Manual at 95.
[20] S20 User Manual at 61.

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Useful features

- **Auto HDR**: Capture more detail in the bright and dark areas of your shots.
- **Selfie tone**: Add a warm or cool tint to your selfies.
- **Tracking auto-focus**: Keep a moving subject in focus.
- **Pictures as previewed**: Save selfies as they appear in the preview without flipping them.
- **Grid lines**: Display viewfinder grid lines to help compose a picture or video.
- **Location tags**: Attach a GPS location tag to the picture.

56.   Another example of a Samsung Location App on the Galaxy S20 is a "Places"

feature which allows a user to explore nearby business and venues using location services:[21]

Places

Explore nearby business and venues to get contact information and directions.

1. From 🅒 **Phone**, tap **Places**.
2. Tap a category to search nearby.
3. Tap a location to view contact information and directions.

☀ **NOTE** Location services must be enabled to use this feature.

57.   Another example of a Samsung Location App on the Galaxy S20 is a "Smart Lock"

feature which unlocks the device automatically upon detecting a "trusted location":[22]

4. Configure the following screen lock options:
   - **Smart Lock**: Unlock your device automatically when trusted locations or other devices have been detected. A secure screen lock is required for this feature.
   - **Secure lock settings**: Customize your secure lock settings. A secure screen lock is required for this feature.
   - **Always On Display**: Enable the Always On Display screen. For more information, see Always On Display.

58.   Another example of a Samsung Location App on the Galaxy S20 is the "Find my

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[21] S20 User Manual at 101.
[22] S20 User Manual at 150.

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Mobile" features which uses Google's location service.[23]

Find My Mobile

You can protect your device from loss or theft by allowing your device to be locked, tracked online, and for your data to be deleted remotely. A Samsung account is required, and Google location service must be turned on in order to use Find My Mobile. For more information, visit samsung.com/us/support/owners/app/find-my-mobile.

59.   On information and belief, the Accused Products come preloaded with a number of third-party applications. On information and belief, some of these preloaded third-party applications use the device location information (collectively, "Third Party Location Apps").

60.   For example, one of the Third Party Location Apps is Google Maps.[24]

Maps

Get directions and other location-based information. You must enable location services to use Google Maps. For more information, see Location.

Visit support.google.com/maps to learn more.

61.   On information and belief, the accused Samsung Phones include Google Maps, as manufactured, used, imported, offered for sale and/or sold in the United States.

62.   On information and belief, the accused Samsung Tablets include Google Maps, as manufactured, used, imported, offered for sale and/or sold in the United States.

63.   On information and belief, the accused Samsung Watches include Google Maps, as manufactured, used, imported, offered for sale and/or sold in the United States.

64.   Another example of the Third Party Location Apps is Google Chrome.[25]

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[23] S20 User Manual at 151.
[24] *See, e.g.,* S20 User Manual at 112.
[25] *See, e.g.,* S20 User Manual at 111.

Share your location

Get more useful information from sites by letting them see your location. For example, by sharing your location, you can find food near you faster.

Let a site know your location

By default, Chrome asks you when a site wants to see your location. To let the site know where you are, choose **Allow**. Before sharing your location, review the site's privacy policy.

If you use Google as your default search engine on your phone, your location is used by default for your searches on Google.

Android   Computer   iPhone & iPad

Change your default location settings

1. On your Android phone or tablet, open the Chrome app .
2. To the right of the address bar, tap More ⋮ > **Settings**.
3. Tap **Site settings** > **Location**.
4. Turn **Location** on or off.

To change the settings for a specific site, tap the site name listed below.

Change Google's access to your location

When Google is your default search engine, your location is used for your searches in the address bar and on Google.

To stop the use of your location in searches:

1. On your Android phone or tablet, open the Chrome app .
2. Visit a Google search page, like google.com.
3. To the left of the web address, tap Lock 🔒.
4. Tap **Permissions** > **Location access**.
5. Select **Block** for current search engine.

How Chrome shares your location

If you let Chrome share your location with a site, Chrome sends information to Google Location Services to get an estimate of where you are. Chrome can then share that info with the site that wants your location.

65.   On information and belief, the accused Samsung Phones include Google Chrome, as manufactured, used, imported, offered for sale and/or sold in the United States.

66.   On information and belief, the accused Samsung Tablets include Google Chrome, as manufactured, used, imported, offered for sale and/or sold in the United States.

67.   On information and belief, the accused Samsung Watches include Google Chrome, as manufactured, used, imported, offered for sale and/or sold in the United States.

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68.   Another example of the Third Party Location Apps is Instagram.

69.   On information and belief, the accused Samsung Phones include Instagram, as manufactured, used, imported, offered for sale and/or sold in the United States.

70.   On information and belief, the accused Samsung Tablets include Instagram, as manufactured, used, imported, offered for sale and/or sold in the United States.

71.   On information and belief, the accused Samsung Watches include Instagram, as manufactured, used, imported, offered for sale and/or sold in the United States.

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[26] https://help.instagram.com/171821142968851 (last visited Jan. 5, 2023).
[27] https://www.newsnationnow.com/business/tech/is-instagrams-precise-location-feature-tracking-you (last visited Jan. 5, 2023).

72.   Another example of the Third Party Location Apps is Facebook.[28]

What is Location Services?

Location Services, sometimes called Location Access, is a setting on your phone or other mobile device. When on, Location Services helps Facebook provide you with location features, including allowing you to post content that's tagged with your location, get more relevant ads and find places nearby.

You can turn off Location Services at any time.

You may still share your precise location when you use our products. For example, we may receive and store location data when you check-in, RSVP as attending an event or post photos that includes location information.

For Android 10 or newer

If your phone runs on Android 10 or newer, you can set Location Services to **Allow only while using the app**, **Ask every time** or **Deny**.

For Android 9 or earlier

If your phone runs on Android 9 or earlier, you can choose to turn Location Services on or off.

Learn more about your Location information

When Location Services is turned off, we may still estimate your location using things like check-ins, events and information about your internet connection.

Specific location information like your device's GPS signal and connection information like your Wi-Fi connection or IP address (internet protocol address) help us understand where you are. Your IP address is a unique number assigned to a device, like a phone or computer, that allows it to communicate over the internet. Numbers are assigned according to standard guidelines, or protocols. Just like you need a mailing address to receive a letter from a friend, your device needs a digital address to receive information on the internet.

We use this information to provide more relevant and personalized experiences, protect your account, and provide better ads. See our Privacy Policy and Privacy Basics to learn more about how we use your location information.

73.   On information and belief, the accused Samsung Phones include Facebook, as manufactured, used, imported, offered for sale and/or sold in the United States.

74.   On information and belief, the accused Samsung Tablets include Facebook, as manufactured, used, imported, offered for sale and/or sold in the United States.
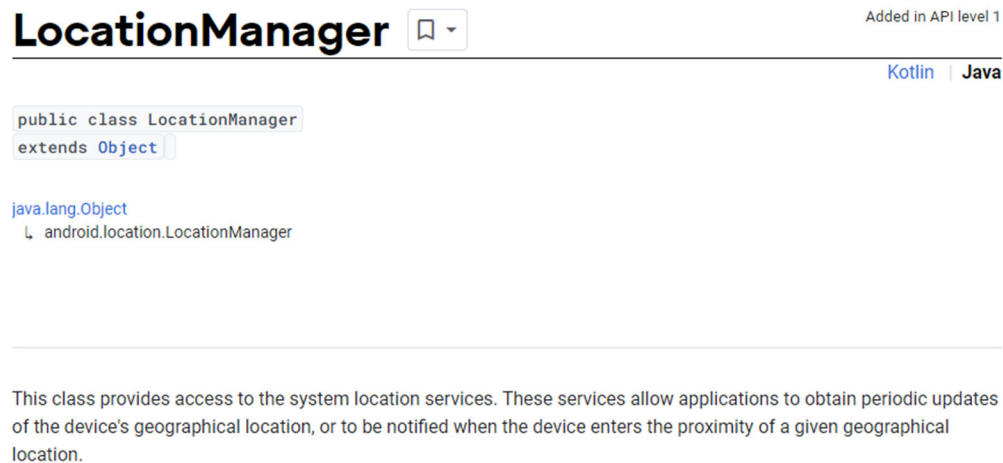
75.   On information and belief, the accused Samsung Watches include Facebook, as manufactured, used, imported, offered for sale and/or sold in the United States.

76.   On information and belief, the Samsung Location Apps and the Third Party

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[28] https://www.facebook.com/help/337224676357509 (last visited Jan. 5, 2023).

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Location Apps in the Samsung Mobile Devices use the Android Framework Location APIs.[29] The

Android Framework Location APIs then hook into the next lower layer on the Android stack

referred to as the Application Framework. The LocationManager software within this Application

Framework controls the power to a number of sensors in the Samsung Mobile Devices including

the GPS. The LocationManager allows applications to obtain periodic updates of the device's

geographical location, or to be notified when the device enters the proximity of a given

geographical location.[30]

77.   Fused Location Provider API (hereinafter, "Fused-Location") is provided as a

wrapper around the Framework Location APIs via a service module preloaded on Android Devices

and referred to as Google Play Services.

78.   On information and belief, the Accused Products as manufactured, used, imported,

offered for sale and/or sold in the United States include Google Play Services.

79.   On information and belief, Samsung has pre-loaded Fused-Location directly on a

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[29] The Android Framework Location APIs are available, for example, at
https://android.googlesource.com/platform/frameworks/base/+/refs/heads/master/location/java/android/location (last
visited Jan. 5, 2023).
[30] https://developer.android.com/reference/android/location/LocationManager (last visited Jan. 5, 2023).

number of the Accused Products including, for example, the Samsung Galaxy S series (e.g., S9,[31] S10,[32] S20 Ultra,[33] S20 FE,[34] S21[35]) and Samsung Galaxy Z series (e.g., Flip[36]).

80.   For example, Samsung Galaxy S20 infringes representative claim 37 of the '206 Patent. On information and belief, the remaining Accused Products infringe representative claim 37 of the '206 Patent at least for the same reasons and in the same manner.

81.   Claim 37 of the '206 Patent claims a method of acquiring a position on a mobile wireless communication device for a wireless communications network, said mobile wireless communication device possessing wireless communications capability for said wireless communications network and an embedded GPS module for GPS capability, said GPS referring to GPS-based techniques, said method comprising: determining when said embedded GPS module should be powered on, said embedded GPS module then being powered on, said when said embedded GPS module should be powered on being dependent on at least one of a current radio position and a position error of said mobile device determined from the wireless communications network, said wireless communications network being different from said GPS.

82.   Samsung Galaxy S20 implements a method of acquiring a position on a mobile wireless communication device for a wireless communications network, said mobile wireless communication device possessing wireless communications capability for said wireless communications network and an embedded GPS module for GPS capability, said GPS referring to GPS-based techniques.[37]

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[31] https://docs.samsungknox.com/CCMode/G960F_Q.pdf (last visited Jan. 5, 2023).
[32] https://docs.samsungknox.com/CCMode/G973U_Q.pdf (last visited Jan. 5, 2023).
[33] https://docs.samsungknox.com/CCMode/G988U_Q.pdf (last visited Jan. 5, 2023).
[34] https://docs.samsungknox.com/CCMode/G781B_R.pdf (last visited Jan. 5, 2023).
[35] https://docs.samsungknox.com/CCMode/G998N_5G_R.pdf (last visited Jan. 5, 2023).
[36] https://docs.samsungknox.com/CCMode/SCG04_Q.pdf (last visited Jan. 5, 2023).
[37] https://www.samsung.com/au/smartphones/galaxy-s20/specs/ (last visited Dec. 30, 2022).

Galaxy S20 Specs & Features

Specs

Specification

Galaxy S20 Ultra 5G(128GB) | Galaxy S20 Ultra 5G(512GB)
Galaxy S20 | Galaxy S20 5G | Galaxy S20+ | Galaxy S20+ 5G
Galaxy S20 FE (SM-G780G) | Galaxy S20 FE 5G

Colours

Cosmic Gray	Cosmic Black	Cloud White

Network/Bearer

SIM size	Infra
Nano-SIM (4FF), Embedded-SIM	2G GSM, 3G WCDMA, 4G LTE FDD, 4G LTE TDD, 5G Sub6 FDD, 5G TDD Sub6

2G GSM	3G UMTS
GSM850, GSM900, DCS1800, PCS1900	B1(2100), B2(1900), B4(AWS), B5(850), B8(900)

4G FDD LTE	4G TDD LTE
B1(2100), B2(1900), B3(1800), B4(AWS), B5(850), B7(2600), B8(900), B12(700), B13(700), B17(700), B18(800), B19(800), B20(800), B25(1900), B26(850), B28(700), B32(1500), B66(AWS-3)	B38(2600), B39(1900), B40(2300), B41(2500)

5G FDD Sub6	5G TDD Sub6
N1(2100), N3(1800), N5(850), N7(2600), N8(900), N28(700)	N40(2300), N77(3700), N78(3500)

Connectivity

ANT+	USB Interface
Yes	USB Type-C

USB Version	Location Technology
USB 3.2 Gen 1	GPS, Glonass, Beidou, Galileo

Earjack	MHL
USB Type-C	No

Wi-Fi	Wi-Fi Direct
802.11 a/b/g/n/ac/ax 2.4G+5GHz, HE80, MIMO, 1024-QAM	Yes

Bluetooth Version	NFC
Bluetooth v5.0	Yes

PC Sync.	
Smart Switch (PC version)	

OS

Android

83.   The location services on the Samsung Galaxy S20 use a combination of GPS,

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mobile network and Wi-fi to determine device location.[38]

Location

Location services use a combination of GPS, mobile network and Wi-Fi to determine the location of your device.

1. From Settings, tap ⬤ **Location**.
2. Tap ⬤ to turn on Location services.

💡 **TIP** Some apps require location services be turned on for full functionality.

Location services

Location services store and use your device's most recent location data. Certain apps can use this data to improve your search results based on places that you have visited.

1. From Settings, tap ⬤ **Location**.
2. Tap an entry under **Location services** to see how your location information is used.

84.   The Samsung Location Apps and the Third Party Location Apps running on the Samsung Galaxy S20 use the determined device location information.

85.   Samsung Galaxy S20 determines when said embedded GPS module should be powered on, and said embedded GPS module is then powered on.

86.   On information and belief, the Android OS allows applications running on the Samsung Galaxy S20 (e.g., Samsung Location Apps and the Third Party Location Apps) to control power on (and off) functionality of GPS through several attributes, e.g., one being setting the required accuracy to control whether GPS is used or not:

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[38] S20 User Manual at 156-157.

Understand battery drain

Location gathering and battery drain are directly related in the following aspects:

- Accuracy: The precision of the location data. In general, the higher the accuracy, the higher the battery drain.
- Frequency: How often location is computed. The more frequent location is computed, the more battery is used.
- Latency: How quickly location data is delivered. Less latency usually requires more battery.

Accuracy

You can specify location accuracy using the `setPriority()` method, passing one of the following values as the argument:

- `PRIORITY_HIGH_ACCURACY` provides the most accurate location possible, which is computed using as many inputs as necessary (it enables GPS, Wi-Fi, and cell, and uses a variety of Sensors), and may cause significant battery drain.
- `PRIORITY_BALANCED_POWER_ACCURACY` provides accurate location while optimizing for power. Very rarely uses GPS. Typically uses a combination of Wi-Fi and cell information to compute device location.
- `PRIORITY_LOW_POWER` largely relies on cell towers and avoids GPS and Wi-Fi inputs, providing coarse (city-level) accuracy with minimal battery drain.
- `PRIORITY_NO_POWER` receives locations passively from other apps for which location has already been computed.

The location needs of most apps can be satisfied using the balanced power or low power options. High accuracy should be reserved for apps that are running in the foreground and require *real time* location updates (for example, a mapping app).

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Constants

public static final int **PRIORITY_BALANCED_POWER_ACCURACY**

Requests a tradeoff that is balanced between location accuracy and power usage.

Constant Value: 102

public static final int **PRIORITY_HIGH_ACCURACY**

Requests a tradeoff that favors highly accurate locations at the possible expense of additional power usage.

Constant Value: 100

public static final int **PRIORITY_LOW_POWER**

Requests a tradeoff that favors low power usage at the possible expense of location accuracy.

Constant Value: 104

public static final int **PRIORITY_PASSIVE**

Ensures that no extra power will be used to derive locations. This enforces that the request will act as a passive listener that will only receive "free" locations calculated on behalf of other clients, and no locations will be calculated on behalf of only this request.

Constant Value: 105

40

87.   On information and belief, when said embedded GPS module of the Samsung Galaxy S20 should be powered on is dependent on at least one of a current radio position and a position error of said mobile device determined from the wireless communications network, said wireless communications network being different from said GPS.

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[39] https://developer.android.com/guide/topics/location/battery (last visited Dec. 30, 2022).

[40] https://developers.google.com/android/reference/com/google/android/gms/location/Priority#PRIORITY_HIGH_ACCURACY (last visited Jan. 6, 2023).

88.   For instance, the Android OS running on the Samsung Galaxy S20 allows an application to acquire a current radio position.

89.   The Android OS running on the Samsung Galaxy S20 also allows an application to independently get the position error (e.g., through getAccuracy()).

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[41]

https://developers.google.com/android/reference/com/google/android/gms/awareness/snapshot/LocationResult?hl=en (last visited Dec. 30, 2022).

getAccuracy 🔗   Added in API level 1

```
public float getAccuracy ()
```

Returns the estimated horizontal accuracy radius in meters of this location at the 68th percentile confidence level. This means that there is a 68% chance that the true location of the device is within a distance of this uncertainty of the reported location. Another way of putting this is that if a circle with a radius equal to this accuracy is drawn around the reported location, there is a 68% chance that the true location falls within this circle. This accuracy value is only valid for horizontal positioning, and not vertical positioning.

This is only valid if `hasAccuracy()` is true. All locations generated by the `LocationManager` include horizontal accuracy.

Returns	
float	horizontal accuracy of this location Value is 0.0 or greater

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90.   The Android OS running on the Samsung Galaxy S20 also allows an application to independently set the required error of the position location (e.g., through setAccuracy()).

setAccuracy   Added in API level 1

```
public void setAccuracy (int accuracy)
```

Indicates the desired accuracy for latitude and longitude. Accuracy may be `ACCURACY_FINE` or `ACCURACY_COARSE`. More accurate location may consume more power and may take longer.

Parameters	
accuracy	int: Value is NO_REQUIREMENT, ACCURACY_FINE, or ACCURACY_COARSE

Throws	
IllegalArgumentException	if accuracy is not one of the supported constants

43

91.   The Android OS running on the Samsung Galaxy S20 also allows applications to use only wireless communication networks (e.g., Wifi and/or cellular signal and not GPS) for

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42 https://developer.android.com/reference/android/location/Location#getAccuracy() (last visited Dec. 30, 2022).
43 https://developer.android.com/reference/android/location/Criteria#setAccuracy(int) (last visited Dec. 30, 2022).

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positioning.[44]

> ## Understand battery drain
>
> Location gathering and battery drain are directly related in the following aspects:
>
> - Accuracy: The precision of the location data. In general, the higher the accuracy, the higher the battery drain.
> - Frequency: How often location is computed. The more frequent location is computed, the more battery is used.
> - Latency: How quickly location data is delivered. Less latency usually requires more battery.
>
> ## Accuracy
>
> You can specify location accuracy using the `setPriority()` method, passing one of the following values as the argument:
>
> - `PRIORITY_HIGH_ACCURACY` provides the most accurate location possible, which is computed using as many inputs as necessary (it enables GPS, Wi-Fi, and cell, and uses a variety of Sensors), and may cause significant battery drain.
> - `PRIORITY_BALANCED_POWER_ACCURACY` provides accurate location while optimizing for power. Very rarely uses GPS. Typically uses a combination of Wi-Fi and cell information to compute device location.
> - `PRIORITY_LOW_POWER` largely relies on cell towers and avoids GPS and Wi-Fi inputs, providing coarse (city-level) accuracy with minimal battery drain.
> - `PRIORITY_NO_POWER` receives locations passively from other apps for which location has already been computed.
>
> The location needs of most apps can be satisfied using the balanced power or low power options. High accuracy should be reserved for apps that are running in the foreground and require *real time* location updates (for example, a mapping app).

92.   Samsung has and continues to directly infringe the '206 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States the Accused Products that satisfy each and every limitation of one or more claims of the '206 Patent.

93.   Samsung had actual notice of the '206 Patent and its infringement of the same at least as of December 3, 2020, when it received a first letter from Nariste regarding the same.

94.   Samsung had actual notice of the '206 Patent and its infringement of the same at least as of January 26, 2023, when it received a second letter from Nariste regarding the same.

95.   Samsung had actual notice of the '206 Patent and its infringement of the same at least as of the filing date of this Complaint.

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[44] https://developer.android.com/guide/topics/location/battery (last visited Dec. 30, 2022).

96.   Samsung instructs the users to choose location services during device set up for the

Accused Products as is shown, for example, in the Samsung Galaxy S20 User Manual:[45]

Getting started

Use the Setup Wizard

The first time you turn your device on, the Setup Wizard guides you through the basics of setting up your device.

Follow the prompts to choose a default language, connect to a Wi-Fi® network, set up accounts, choose location services, learn about your device's features, and more.

97.   In the User Manual, Samsung tells users that some applications require that location

services be turned on for full functionality.[46]

Location

Location services use a combination of GPS, mobile network and Wi-Fi to determine the location of your device.

1. From Settings, tap ⦿ Location.
2. Tap ⬭ to turn on Location services.

☀ TIP Some apps require location services be turned on for full functionality.

98.   In the User Manual, Samsung provide instructions for users to configure

permissions for applications to access the device location information.[47]

App permissions

Configure permissions for apps that want to access your location information.

1. From Settings, tap ⦿ Location > App permissions.
2. Tap an app and select which of the following location permissions to grant it:
   • Allow all the time
   • Allow only while using the app
   • Deny

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[45] S20 User Manual at 12.
[46] S20 User Manual at 156.
[47] S20 User Manual at 156.

99.   In the User Manual, Samsung provides instructions on how to obtain a list of applications that have requested the user's location:[48]

Recent location requests

View a list of apps that have requested your location.

1. From Settings, tap 📍 **Location**.
2. Tap ⬭ to turn on Location services.
3. Tap an entry under **Recent location requests** to view the app's settings.

100.   Samsung advertises the Samsung Locations Apps and encourages users to use the Samsung Location Apps.

101.   Samsung advertises the Third Party Location Apps and encourages users to use the Third Party Location Apps.

102.   Samsung provides instructions to users and encourages users to download applications from the Google Play Store.[49]

SAMSUNG   Shop Mobile TV & AV Home Appliances Computing Displays Accessories SmartThings #YouMake   Support For Business   🔍 🛒 👤

How to install apps from the Google Play Store

Last Update date : Mar 25, 2022

The **Google Play Store** provides users with access to download many types of applications, or apps, and games to download and play on their smartphone or tablet. Some of the apps and games are free to download, while others cost a small fee.

The range of content available through the **Google Play Store** is:

- **Apps and Games** for Android devices
- **Movies and TV Shows** which you can buy or rent (requires installation of the **Google Play Movies & TV** app)
- **Music** for purchase or streaming subscriptions (requires installation of the **Google Play Music** app)
- **Ebooks** (requires installation of the **Google Play Books** app)
- **News** and **publication** subscriptions

For a step-by-step guide on uninstalling or disabling applications on your Galaxy device, check out our page How do I uninstall an app on my Samsung phone.

Please Note: To download apps from the **Google Play Store** you will need a strong internet connection - either using your mobile data or be connected to a Wi-Fi connection, you will also need to be signed in with a **Google Account**. Click here for information on creating a Google Account. You are **not** required to add a credit card or any financial information to be able to download free apps.

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[48] S20 User Manual at 156.
[49] https://www.samsung.com/au/support/mobile-devices/how-to-install-apps-from-the-google-play-store/ (last visited Jan. 5, 2023)

103.   The Google Play Store includes a number of applications that use location services as described above, including, for example, Life360,[50] SnapChat,[51] PokemonGo,[52] FourSquare,[53] and others (collectively, "Google Play Location Apps").

104.   Accordingly, Samsung advertises the infringing features, has published instructions regarding the use of the infringing features, and encourages customers to use the infringing features by providing instructions and encouraging them to use the Samsung Location Apps, Third Party Locations Apps, and the Google Play Location Apps. With respect to this induced infringement, at least the end users of the Accused Products are direct infringers that directly infringe the claims of the '206 Patent pursuant to Samsung's instructions and advertisement.

JURY DEMAND

105.   Nariste hereby demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Nariste requests entry of judgment in its favor and against Samsung as follows:

a) A declaration that Samsung has directly infringed one or more claims of the Asserted Patent, either literally or under the doctrine of equivalents;

b) A declaration that Samsung has induced infringement and/or is inducing infringement of one or more claims of the Asserted Patent, either literally or under the doctrine of equivalents;

c) An award of damages pursuant to 35 U.S.C. § 284 adequate to compensate Nariste for

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[50] https://play.google.com/store/search?q=life360&c=apps&hl=en_US&gl=US (last visited Jan. 5, 2023).
[51] https://play.google.com/store/apps/details?id=com.snapchat.android&hl=en_US&gl=US (last visited Jan. 5, 2023).
[52] https://play.google.com/store/apps/details?id=com.nianticlabs.pokemongo&hl=en_US&gl=US (last visited Jan. 5, 2023).
[53] https://play.google.com/store/apps/details?id=com.joelapenna.foursquared&hl=en_US&gl=US (last visited Jan. 5, 2023).

Samsung's infringement of the Asserted Patent in an amount according to proof at trial (together with prejudgment and post-judgment interest), but no less than a reasonable royalty;

d) An award of costs and expenses pursuant to 35 U.S.C. § 284 or as otherwise permitted by law; and

e) Such other and further relief, whether legal, equitable, or otherwise, to which Nariste may be entitled or which this Court may order.

Dated: January 27, 2023

Respectfully submitted,

/s/ *Amir Alavi*
Amir Alavi
Texas Bar No. 00793239
aalavi@aatriallaw.com
Masood Anjom
Texas Bar No. 24055107
manjom@aatriallaw.com
Scott Clark
Texas Bar No. 24007003
sclark@aatriallaw.com
Michael McBride
Texas Bar No. 24065700
mmcbride@aatriallaw.com
ALAVI & ANAIPAKOS PLLC
3417 Mercer Street, Suite C
Houston, Texas 77027
Telephone: (713) 751-2362
Facsimile: (713) 751-2341

Counsel for Plaintiff Nariste Networks Pty. Ltd.